



San Joaquin Geological Society

Date: Tuesday, June 12, 2018

Time: 6:00 PM Social Hour
7:00 PM Dinner
8:00 PM Lecture

Place: Eagles Lodge
1718 17th Street, Bakersfield, CA 93302

PSAAPG Members
\$25 with reservation
\$30 without reservation

Non PSAAPG Members
\$30 with reservation

Full-time Students with ID:
\$10 - Courtesy of
California Resources Corporation

*** RSVP ***

**By: noon Monday,
June 11, 2018**

Register online:
<http://www.SanJoaquinGeologicalSociety.org/>

Pay online or at the door

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<http://www.SanJoaquinGeologicalSociety.org/>

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Paleoseismology of the Western Garlock Fault at Campo Teresa, Tejon Ranch, Southern California

Presented by: Eldon Gath

Abstract: The 250-km-long northeast-trending Garlock fault in southern California bounds extension on the north from right-laterally slipping blocks to the south. Multiple paleoseismic sites have been published for the central and eastern segments of the fault, but only Twin Lakes on the western segment. As part of the geotechnical investigation of the Tejon Ranch's Mountain Village project, about two dozen trenches were excavated and almost 100 cone penetrometers and borings were drilled within the Garlock fault zone. Two trenches at the cattle camp Campo Teresa, 25 km west of Twin Lakes, exposed the northern and southern fault traces within a narrow stepover and generated data on the timing of the last 2-4 rupture events. The exposures allowed us to constrain displacements and ages based on two radiocarbon dates from colluvial deposits; two events since 1710±40 ybp and likely two events 1710 - 4100±40 ybp. The MRE and penultimate events appear to be similar 4-m left-lateral events on the southern fault, each with about 2 m of vertical separation on the northern fault. The talk will review the paleoseismic understanding of the Garlock fault in general, focusing in on the studies within Tejon Ranch that shed light on the western segment in particular.

Biography: Eldon Gath is the President of Earth Consultants International, a geological consulting company based in Santa Ana, CA. He has been President of the South Coast Geological Society, President of the Association of Environmental and Engineering Geologists, was the 2015 Richard H. Jahns Distinguished Lecturer for AEG & GSA, and is currently the US National Group Leader and North American Vice President of the International Association of Engineering Geology and the Environment. He has led field projects in six countries, including Turkey, Papua New Guinea, and Panama. As Project Manager, he led the ECI team that completed the geological hazards screening for development planning and the EIR for Tejon Ranch's Mountain Village project, and the fault hazard investigations for their Centennial project.

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